

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of  
HUBERT SJOERD BLAAUW ET AL.

Atty. Docket  
NL 020701

Confirmation No. 1272

Serial No. 10/523,431

Group Art Unit: 3724

Filed: JANUARY 28, 2005

Examiner: LANDRUM, E. F.

Title: WEAR-RESISTANT STAINLESS CUTTING ELEMENT OF AN ELECTRIC  
SHAVER, ELECTRIC SHAVER, AND METHOD OF PRODUCING SUCH A  
CUTTING ELEMENT

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**APPELLANTS' REPLY BRIEF**

Sir:

In response to the Examiner's Answers mailed on April 13, 2010 and the  
communication mailed on April 26, 2010, please consider the following remarks:

### REMARKS

Appellants maintain the arguments submitted in the Appeal Brief filed on February 17, 2010 which is incorporated herein by reference. Further, Appellants refute the allegations made in the Examiner's Answer of April 13, 2010.

In particular, assuming arguendo that the most of the allegations (except those discussed below) noted in the Response to Argument section 10, on pages 9-11 are true, it is respectfully submitted that the cited references do not disclose or suggest the present invention as recited in independent claim 1, and similarly recited in independent claims 7, 10 and 17 which, amongst other patentable features, recites (illustrative emphasis provided):

the decreasing hardness of the diffusion layer decreasing from outer portions of the diffusion layer toward a center of the diffusion layer and **meeting at the center** of the diffusion layer to **form a minimum** peak at the center, wherein a hardness at the center of the diffusion layer is an original hardness the stainless steel.

A cutting element with a decreasing hardness of the diffusion layer decreasing from outer portions toward a center of the diffusion layer, and **meeting at the center** of the diffusion layer to form a **minimum peak at the center**, is nowhere disclosed or suggested in U.S. Patent No. 6,354,008 (Domoto), JP 60-162766 (Oiwa), U.S. Patent No. 5,953,969 (Rosenhan), Applicants' Admitted Prior Art (AAPA), an Article by Liang et al. entitled "Low Pressure Plasma Arc Source Ion Nitriding Compared with Glow-Discharge Plasma Nitriding of Stainless Steel" (Liang), an Article by Blawert et al. entitled "Surface Treatment of

Nitriding Steel 34CrAlNi7: Comparison between Pulsed Plasma Nitriding and Plasma Immersions ion Implantation" (Blawert), a book by Askeland entitled "The Science and Engineering of Materials" (Askeland), U.S. Patent No. 6,662,614 (Lim), U.S. Patent No. 5,857,260 (Yamada), U.S. Patent No. 6,584,691 (Gerasimov), and U.S. Patent No. 4,259,126 (Cole).

Rather, as clearly shown in FIG 2 of Rosenhan, the hardness decreases away from the center to reach a **plateau** near the center.

Further, it is respectfully submitted that a diffusion layer with decreasing hardness that decreases "from outer portions of the diffusion layer toward a center of the diffusion layer and **meeting at the center** of the diffusion layer **to form a minimum peak at the center**," as recited in independent claim 1, and similarly recited in independent claims 7 and 11, is **NOT intrinsic** to the process of hardening. Hardening may be performed to obtain a variety of differently hardened elements. For example, the hardening may be performed to form a uniformly hardened steel, or a steel with a hardness that decreases away from the center to reach a **plateau** near the center, as shown in FIG 2 of Rosenhan. Further, if hardening is performed for **too long**, then the hardness at the center would no longer be the original hardness; rather the hardness at the center would be **greater than the original** hardness.

For example, the specification recites on page 5, lines 3-6 that:

**If the blade was uniformly hardened through and through** to a hardness of 1500 HV, it would **become very brittle** and consequently

would **snap easily**. With the process according to the invention this disadvantage is avoided. (Emphasis added)

Accordingly, there is nothing 'intrinsic' about these above-noted recitations in independent claims 1, 7 and 10, which are nowhere disclosed or suggested in Domoto, Oiwa, Rosenhan, AAPA, Liang, Blawert, Askeland, Lim, Yamada, Gerasimov and Cole, alone or in combination.

Accordingly, it is respectfully submitted that independent claims 1, 7, 10 and 17 should be allowable. In additions, claims 2-7, 11-16, and 25-28 should be allowable at least based on their dependence from independent claims 1, 7, 10 and 17.

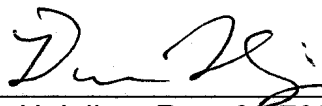
In addition, Appellants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, Appellants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

CONCLUSION

Claims 1-7, 10-17, and 25-28 are patentable over Domoto, Oiwa, Rosenhan, AAPA, Liang, Blawert, Askeland, Lim, Yamada, Gerasimov and Cole.

Thus, the Examiner's rejections of claims 1-7, 10-17, and 25-28 should be reversed.

Respectfully submitted,

By   
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